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| APPLICATION NO.          | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 10/508,976               | 09/24/2004  | Young-Nam Kim        | IK-0096             | 1144             |
| 34610                    | 7590        | 11/27/2007           |                     |                  |
| KED & ASSOCIATES, LLP    |             |                      | EXAMINER            |                  |
| P.O. Box 221200          |             |                      | KUHN, MART K        |                  |
| Chantilly, VA 20153-1200 |             |                      |                     |                  |
|                          |             |                      | ART UNIT            | PAPER NUMBER     |
|                          |             |                      | 3637                |                  |
|                          |             |                      | MAIL DATE           | DELIVERY MODE    |
|                          |             |                      | 11/27/2007          | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|  |                                      |                                   |  |
|--|--------------------------------------|-----------------------------------|--|
| <p align="center"><b>Office Action Summary</b></p> | <b>Application No.</b><br>10/508,976 | <b>Applicant(s)</b><br>KIM ET AL. |  |
|  | <b>Examiner</b><br>Mart K. Kuhn      | <b>Art Unit</b><br>3637           |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-30 is/are allowed.
- 6) ☒ Claim(s) 1,3 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 17 September 2007. These drawings are acceptable.

### ***Claim Rejections—35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 24–25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 24 states that the rotation limiter “allows substantially unlimited rotation of the door” when its components are disengaged. This is unsupported by the specification and drawings, where the rotation of the door has clear limits imposed by the structure of the hinge unit. As described in the specification, the door is unable to rotate beyond the respective limits of Figs. 4a and 4b, regardless of the engagement or lack thereof of the locking portion and tilting lock. It does not appear, therefore, that Applicants had possession of the claimed invention and the requisite “substantially unlimited rotation”. For the purposes of this examination, claim 24 is considered as reciting that the rotation limiter allows the door to be freely rotated between the first and second positions when the locking portion and tilting lock are disengaged.

***Claim Rejections—35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Dawley et al., US patent 3,295,908. Dawley et al. disclose a door apparatus for a refrigerator having a door (3) with a thermally isolating layer (cross-hatched area inside door 3); a frame (6) coupled to a rear of the door, slidably movable along with the door, and having a storage space (9); a coupler (25) rotatably connecting the door to the frame (column 2, lines 58–63), allowing the door to rotate from a first, substantially vertical position (Fig. 1) to a second, tilted position (Fig. 2); and a rotation limiter (30, 38) selectively limiting the rotation of the door with respect to the frame; the rotation limiter comprising a locking portion (30) provided on the frame, and a corresponding tilting lock (38) provided on the door, the tilting lock being selectively elastically deformed by the locking portion as the door rotates; and the tilting lock comprising a base plate (12), a resilient piece (38) having a lower surface positioned apart from an upper surface (34) of the base plate, and a locking step (41) on a top surface of the resilient piece to be caught by the locking portion.

***Claim Rejections—35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 23–25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dawley et al. as applied to claim 1 above, and further in view of Schmidt et al., US patent 4,149,518. Dawley et al. teach a rotation limiter which fixes the door in the second, tilted position when engaged, not in the first, substantially vertical position. However, Schmidt et al. teach a door apparatus, disclosed as for an oven but usable for a refrigerator, having a door (6); a frame (9) coupled to a rear of the door, slidably movable along with the door, and having a storage space (10); a coupler (11) rotatably coupling the door to a front end of the frame, allowing the door to rotate from a first, substantially vertical position (Fig. 1) to a second, tilted position (Fig. 2); and a rotation limiter (8, 17) selectively limiting an angle of rotation of the door with respect to the frame; further teaching that the rotation limiter, when engaged, fixes the door in the first, substantially vertical position (column 2, lines 7–9). Thus in the door apparatus of Schmidt et al. the prior art contains a comparable device improved in the same way as the claimed invention, with a door fixed in a vertical position when a rotation limiter is engaged. One of ordinary skill in the art could have applied the known improvement technique of Schmidt et al. to the door apparatus of Dawley et al., with predictable results.

Regarding claims 24 and 25, as they are best understood, Dawley et al. disclose a rotation limiter allowing the door to be freely rotated between the first and second positions when it is disengaged, and wherein the locking portion and tilting lock are disengaged when the resilient piece of the tilting lock is deformed by a force applied thereto.

#### ***Allowable Subject Matter***

8. Claims 27–30 are allowed.

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9. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

10. Applicants' arguments, see page 16, filed 17 September 2007, with respect to the objections to the drawings, abstract, and specification have been fully considered and are persuasive. The objections have been withdrawn.

11. Applicants' arguments, see page 16, filed 17 September 2007, with respect to the rejection of claims 1-4 under 35 U.S.C. § 112, second paragraph, have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

12. Applicants' remaining arguments filed 17 September 2007 have been fully considered but they are not persuasive.

13. Regarding Applicants' assertion that latch member 30 and spring member 38 of Dawley et al. "merely secure the drawer front 3 in its tilted position relative to the frame 6", it is respectfully pointed out that securing the drawer front in a particular position constitutes an extremely strict limit on the rotation of the drawer front. The latch member and spring member, in confining the door to a single orientation when engaged, act as "a rotation limiter that selectively limits an angle of rotation of the door with respect to the frame," as claimed.

14. Regarding Applicants' assertion that "Dawley neither discloses nor suggests that the spring 38 is elastically deformed as the drawer front 3 rotates with respect to the frame 6 from the tilted to the vertical positions," it is respectfully noted that the engagement of the spring and the latch is predicated on the spring being deformed as the door is rotated. Figure 1 shows the

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door in the vertical position, where the spring is biased upwards; Figure 2 shows the door in the tilted position, where the spring has been allowed to extend downwards. The structure shown and described by Dawley et al. would necessarily have the spring member deformed by the rotation of the door.

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mart K. Kuhn whose telephone number is (571) 272-8926. The examiner can normally be reached on M–F, 8:30am–5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MKK MKK

26 November 2007

/Janet Wilkens/  
Primary Examiner  
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